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| 10/629,375 | 07/28/2003 | Fang Hao | Hao 1-2-4 (LCNT/125103) | 6538 |
| 46363 7590 02/26/2008 PATTERSON & SHERIDAN, LLP/ LUCENT TECHNOLOGIES, INC 595 SHREWSBURY AVENUE SHREWSBURY, NJ 07702 | | | EXAMINER WILSON, ROBERT W | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/629,375

Applicant(s)

HAO ET AL.

Examiner

Robert W. Wilson

Art Unit

2619

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/19/07.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-29 are rejected under 35 U.S.C. 102(E) as being anticipated by Chen (U.S.

Patent No.: 6,567,380) and RFC 1771 as extrinsic evidence which is incorporated by reference per col. 5 line 59 to 61.

Referring to claim 1, Chen & RFC 1771 teach: a method for improved inter-domain routing convergence (Router per Fig 3 performs the method utilizing the message formats per Figs 5 & 6 of Chen) comprising: transmitting reason information associated with a route update or withdraw, wherein the reason information comprises a reason for the route update or withdraw (Router per Fig 3 transmits message formats which are both router update and withdraw per Chen and RFC 1771 teaches three field including unfeasible route length field, withdrawn routes and next hop attribute that includes a cost which is a part of local preference per Pgs 4-11, 30, & 36). The unfeasible routes length field has the reason for update or withdraw per Pgs 4-11. When the unfeasible route length field has a value other than zero then routes are unfeasible)

In addition Chen & RFC 1771 teach:

Regarding claim 2, wherein said reason information transmitted along with said route update or withdraw (unfeasible route length field, withdrawn routes, and local preference as per RFC 1771 Pgs 4-11, 30, & 36 are transmitted along with the update message)

Regarding claim 3, wherein said reason information is encoded as a triplet within a route update or withdraw message(unfeasible route length field, withdrawn routes, and local preference as per RFC 1771 Pgs 4-11, 30, & 36 or encoded triplet)

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Regarding claim 4, wherein the triplet comprises;

A type code identifying the reason for the update or withdraw (routes length field contains type code as described above)

An indication of the a node pair associated with the update or withdraw (withdraw routes indicates an inherent pair of nodes per Fig 5 of Chen)

An updated cost of a link between the node pair associated with the update or withdraw (hop count per Pg 38 of RFC 1771 indicates the cost of the link)

Regarding claim 5, wherein said reason information comprises reason selected from the group consisting of lost of peering between nodes and a change in the cost of a link between nodes (local preference per RFC 136 per Pg 36 would result from a loss of peering and hop count per Pg 38 of FC 171 (cost))

Regarding claim 6, wherein a node receiving said reason information uses said reason information to determine which of its candidate route are also affected by substantially the same even that triggered the initial route update or withdrawn and which of it candidate router are not affected (after receiving the routing update message the receiving route assess the routes in its routing table and based upon the local preference or best route as well as the other information determines which routes the table are affected per col. 6 line 50 to col. 8 line 25 of Chen)

Regarding claim 7, wherein a candidate route is considered as a transient route if said receive node determined from said reason information that the candidate route is to be updated or withdrawn (Upon receipt of the routing message the receiving router determines the candidate route is to be updated or withdrawn per col. col. 5 line 40 to col. 8 line 17 of Chen)

Regarding claim 8, wherein said receiving node avoids advertising a candidate route considered as a transient route as a preferred route to its neighbors (The receiving router receives a MED value which is used to as part of the assessment in determining of a local preference per col. 6 line 1 to 67 of Chen)

Regarding claim 9, wherein a route previously considered as a transient is considered as stable if the route is not updated with a predetermined time period (col. 6 line 50 to col. 7 line 14)

Regarding claim 10, further comprising transmitting version information for the route update or withdraw (Version Pg 8 of RFC 1771)

Regarding claim 11, wherein the version information comprises a version of the update or withdraw for each node pair and the change in node pairs form the route previously advertised (Version per Pg 8 of RFC 1771 applies to all update messages)

Regarding claim 12, wherein a node receiving said version information uses said version information to determine the stability of its candidate router (Chen per col. 6 lines 10 to col 8 line 9)

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Regarding claim 13, wherein a candidate route is considered as a transient route if a reason's version is greater than the version corresponding node pair in a path of the candidate route being considered (Chen per col. 6 lines 10 to col. 8 line 9)

Regarding claim 14 wherein said receiving node avoids advertising a candidate route considers as transient route as a preferred route to its neighbors (Chen per col. 5 line 40 to col. 8 line 9)

Referring to claim 15, Chen & RFC 1771 teach: a apparatus for improved inter-domain routing convergence (Transmitting Router & receiving router per Fig 1 which are shown individually per Fig 3 or apparatus of Chen) comprising:

means for identifying reason information associated with a route update or withdraw wherein the reason information comprises a reason for the router update or withdraw (Route processor per Fig 3 or means for identifying per Chen. RFC 1771 teaches that unfeasible routes length field has the reason for update or withdraw per Pgs 4-11. The unfeasible router length field is 0 when no routers have been withdrawn which can also be the reason to update and has IP addresses of unfeasible routers which can be interpreted as reason to withdrawn)

means for transmitting the reasoned information associated with a route update or withdraw to neighboring apparatus (Network Interface or means for transmitting per Fig 3 which is in the Router per Fig 3 of Chen transmits message formats which are both router update and withdraw per Chen and RFC 171 teaches that unfeasible routes length field has the reason for update or withdraw per Pgs 4-11 are sent. The unfeasible router length field is 0 when no routers have been withdrawn which can also be the reason to update and has IP addresses of unfeasible routers which can be interpreted as reason to withdrawn are sent to neighbors apparatus per Fig 1 of Chen)

In addition Chen & RFC 1771 teach:

Regarding claim 16, further comprising:

means for receiving reason information associated with a received update or withdrawn (Network Interface per Fig 3 or means for receiving update or withdraw. Router per Fig 3 receive message formats which are both router update and withdraw per Chen. Chen and RFC 1771 teaches three field including unfeasible route length field, withdrawn routes and next hop attribute that includes a cost which is a part of local preference per Pgs 4-11, 30, & 36). The unfeasible routes length field has the reason for update or withdraw per Pgs 4-11. When the unfeasible route length field has a value other than zero then routes are unfeasible)

means for using said received reason information to determine which of its candidate routes are also affected by substantially the same event that triggered an initial route update or withdrawn and which of its candidate route are not affected (The ROUTE PROCESSOR per Fig 3 or means for reasoning and determining based upon receiving reasoned information as described above.

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Reason information which was received due to a triggered event as well as other updates such as flags per Fig 5 of Chen or substantially the same event to determine what route candidates are updated in its table and which router are not updated in its tables per col. 5 line 51 to col. 8 line 9)

Regarding claim 17, wherein said candidate route is considered as a transient route if said apparatus determined from said received reason information that said candidate route is to be updated or withdrawn (The receiving router evaluates with routes have been updated or withdrawn a labels the routes in the table with a TA (transient attribute) transient indicator per Fig 9)

Regarding claim 18, wherein the apparatus avoids advertising a candidate route considered as a transient route as a preferred route to its neighbors (The router takes into account the Transient Attribute when making a decision on local preference)

Regarding claim 19, further comprising means for transmitting version information for the route update or withdraw (NETWORK INTERFACE per Fig 3 (means for transmitting) and Version Pg 8 of RFC 171)

Regarding claim 20, further comprising:

means for receiving version information; with an update or withdraw (NETWORK INTERFACE per Fig 3 or means for receiving) and

means for using said received version information to determine the stability of its candidate routers (ROUTE PROCESSOR per Fig 3 (means for using) and RFC 1771 teaches receiving version number and Chen teaches determining stability based on version per col. 6 lines 10 to col. 8 line 9)

Regarding claim 21, wherein a candidate route is considered as a transient route if said apparatus determined from said received version information that the reasons's version is greater than the version of a corresponding node pair in a path of the candidate route being considered (Chen version processing per col. 6 lines 10 to col. 8 line 9)

Regarding claim 22, wherein said apparatus avoids advertising a candidate router considered as a transient route as a preferred route to its neighbors (Chen transient route processing per col. 5 line 40 to col. 8 line 9)

Referring to claim 23, Chen & RFC 171 teach: a communication network having improved interdomain routing convergence (Fig 1 per Chen or network) comprising a plurality of network devices (Fig 1 of Chen has a plurality of routers or network devices) each of said network devices comprising a processor and a memory (Each of the routers per Fig 1 are represent by Fig 3 which has a processor and a memory)

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Transmitting reasoned information associated with a route update or withdraw to neighboring apparatus wherein the reason information comprises a reason for the route update or withdraw, wherein the reason information comprises a reason for the route update or withdraw (Router per Fig 3 transmits message formats which are both router update and withdraw per Chen. Chen and RFC 1771 teaches three field including unfeasible route length field, withdrawn routes and next hop attribute that includes a cost which is a part of local preference per Pgs 4-11, 30, & 36). The unfeasible routes length field has the reason for update or withdraw per Pgs 4-11. The unfeasible router length field is 0 when no routers have been withdrawn which can also be the reason to update and has IP addresses of unfeasible routers which can be interpreted as reason to withdrawn are sent to neighbors apparatus per Fig 1 of Chen. When the unfeasible route length field has a value other than zero then routes are unfeasible and should be withdrawn)

receiving a reason information associated with a received update or withdraw (Router per Fig 3 receive message formats which are both router update and withdraw per Chen which the combination of local prefer per RFC 171 per Pg 36, path attributes per Fig 5 of Chen and hop count (cost) per pg 38 per RFC 171 or reason information) and

using said received reason information to determine which of its candidate routes are also affected by substantially the same event that triggered an initial route update or withdrawn and which of its candidate route are not affected (The receiving router uses local prefer per RFC 1771 per Pg 36, path attributes per Fig 5 of Chen and hop count (cost) per pg 38 per RFC 1771 or reason information which was received due to a triggered event as well as other updates such as flags per Fig 5 of Chen or substantially the same event to determine what route candidates are updated in its table and which router are not updated in its tables per col. 5 line 51 to col. 8 line 9)

Regarding claim 24, wherein a candidate route is considered as a transient route if said apparatus determined from said received reason information that said candidate route is to be updated or withdrawn (The receiving router evaluates with routes have been updated or withdrawn a labels the routes in the table with a TA (transient attribute) transient indicator per Fig 9)

Regarding claim 25, wherein the said network devices avoid advertising a candidate route considered as a transient route as a preferred route to its neighbors (The router takes into account the Transient Attribute when making a decision on local preference)

Referring to claim 26, Chen & RFC 171 teach: computer readable medium for storing a set of instructions (Memory per Fig 3 and per col. 4 line 43 to col. 5 line 4 of Chen) wherein said instructions are executed on a processor (Processor per Fig 3 and per col. 4 line 43 to col. 5 line 4 of Chen)

Transmitting reason information associated with a received update or withdraw, wherein the reason information comprises a reason for the route update or withdraw (Router per Fig 3 transmits message formats which are both router update and withdraw per Chen and RFC 171 teaches that unfeasible routes length field has the reason for update or withdraw per Pgs 4-11.

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The unfeasible router length field is 0 when no routers have been withdrawn which can also be the reason to update and has IP addresses of unfeasible routers which can be interpreted as reason to withdrawn are sent to neighbors apparatus per Fig 1 of Chen)

Regarding claim 27, wherein the method further comprises: receiving reason information to determine which of its candidate routes are also affected by substantially the same event that triggered an initial route update or withdrawn and which of its candidate route are not affected (The receiving router uses the combination of local prefer per RFC 171 per Pg 36, path attributes per Fig 5 of Chen and hop count (cost) per pg 38 per RFC 171 or reason information which was received due to a triggered event as well as other updates such as flags per Fig 5 of Chen or substantially the same event to determine what route candidates are updated in its table and which router are not updated in its tables per col. 5 line 51 to col. 8 line 9)

Regarding claim 28, wherein a candidate route is considered as a transient route if said apparatus determined from said received reason information that said candidate route is to be updated or withdrawn (The receiving router evaluates with routes have been updated or withdrawn a labels the routes in the table with a TA (transient attribute) transient indicator per Fig 9)

Regarding claim 29, wherein the said network devices avoid advertising a candidate route considered as a transient route as a preferred route to its neighbors (The router takes into account the Transient Attribute when making a decision on local preference per Pg 4-11, 30 & 36)

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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4. Claims 1 & 2 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/875,124

Referring to claim 1 of the instant application; claim 1 of application 10/875,124 teaches: forwarding a transient route notification message marking the route as no longer valid or reason for update or withdraw which is sent to another inherent router which receives this message

Regarding claim 2 of the instant application; claim 1 of application 10/875,124 teaches: route notification message marking the route as no longer valid or reason for update or withdraw which is sent to another inherent router which receives this message is sent along with the message

This is a provisional obviousness-type double patenting rejection.

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1 & 2 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/670940. Although the conflicting claims are not identical they are not patentably distinct by merely broadening because claims 1 & 2 of the instant application are broader than claim 1 of 10/670940. Claim 1 & 2 merely broaden the claim language of claim 1 of the instant application 10/670940 by eliminating RIB receiver and route disqualification logic.

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Referring to claim 1 of the instant application; claim 1 of application 10/670940 teaches: receiving a message which indicates that a route should be withdrawn based upon unreachability or reason.

Regarding claim 2 of the instant application, claim 1 of application 10/875,124 teaches: route withdrawn based upon unreachability is sent along with the message

This is a provisional obviousness-type double patenting rejection.

Claim Objections

7. Claims 6, 16, 23-25 & 27 are objected to because of the following informalities: Referring to claims 6, 16, 23 & 27, the examiner objects to the usage of "by substantially the same event" because this limitation is confusing to the reader as to whether the event is the same or different. The examiner recommends deletion of "substantially". Appropriate correction is required.

Response to Amendment

8. Applicant's arguments filed 12/19/07 have been fully considered but they are not persuasive.

The examiner respectfully disagrees with the applicant argument that the references (Chen and RFC1771) do not teach wherein the reason information comprises a reason for the route update or withdraw"

The references teach: transmitting reason information associated with a route update or withdraw, wherein the reason information comprises a reason for the route update or withdraw (Router per Fig 3 transmits message formats which are both router update and withdraw per Chen and RFC 1771 teaches three fields including unfeasible route length field, withdrawn routes and next hop attribute that includes a cost which is a part of local preference per Pgs 4-11, 30, & 36). The unfeasible routes length field has the reason for update or withdraw per Pgs 4-11. When the unfeasible route length field has a value other than zero then routes are unfeasible)

The examiner disagrees with the applicant argument that the RFC 1771 does not teach "what has changed".

RFC1771 teaches: what has changed (RFC 1771 teaches three fields including unfeasible route length field, withdrawn routes and next hop attribute that includes a cost which is a part of local preference per Pgs 4-11, 30, & 36). The unfeasible routes length field has the reason for update or withdraw per Pgs 4-11 which also defines what has changed. When the unfeasible route length field has a value other than zero then what has changed is that routes are unfeasible. When the unfeasible routes field is zero then nothing has changed and the routes are feasible)

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The examiner respectfully disagrees with the applicant argument that the two reference cannot be used in a 102 rejection. The examiner has specifically pointed out that on col. 5 lines 59-61 the reference Chen specifically states that the format and functions of the update message is described in RFC 1771; consequently, to use RFC1771 in a 102 rejection because extrinsic evidence is incorporated by reference per col. 5 line 59 to 61.

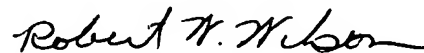
Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W. Wilson whose telephone number is 571/272-3075.

The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on 571/272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Robert W Wilson
Examiner
Art Unit 2619

RWW
2/20/08

